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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,038	03/02/2004	Nobuhito Suehira	249566US2CONT	9746

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EXAMINER

THOMAS, LUCY M

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/790,038	Applicant(s) SUEHIRA ET AL.	
	Examiner Lucy Thomas	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
- 2) ☒ Certified copies of the priority documents have been received in Application No. JP2002-014559.
- 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/02/2004</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kumar et al. (US 5,880,924). Regarding Claim 1, Kumar discloses a charge eliminating mechanism for a stage 20 for a work-to-be-processed 12 (Figure 4), comprising: a grounded wiring line having a first end and a second end, the second end being grounded (see grounded line Figure 4); and a mechanical switching mechanism (see 165 in Figure 4) arranged between the stage and the first end of the wiring line (Column 4, lines 26-32, Column 7, lines 37-57). Regarding Claim 7, Kumar discloses a testing apparatus (see apparatus in Figures 4, 7), comprising the charge eliminating mechanism, which tests electrical characteristics of a work-to-be-processed 12.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-3 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Hilrose (US 6,878,233).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding Claim 1, Hilrose discloses a charge eliminating mechanism for a stage 1 for a work-to-be-processed W (Figures 1-2, 4-6, Column 4, lines 37-41, Column 5, lines 55-65 Column 6, lines 60-64), comprising: a grounded wiring line having a first end and a second end, the second end being grounded (see grounded line in block 8 in Figure 1, in block 12 in Figures 2,4, block 28 in Figures 5-6); and a mechanical switching mechanism (see 8b in Figure 1, 12b in Figures 2, 4) arranged between the stage and the first end of the wiring line. Regarding Claim 2, Hilrose discloses a

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charge eliminating mechanism, wherein the work-to-be-processed W is a work to be tested, and the wiring line includes a resistor (8c, 8d in Figure 1, 12c, 12d in Figures 2, 4 and alternatively 28b, 28c in Figures 5-6) between the first and second ends.

Regarding Claim 3, Hilrose discloses a charge eliminating mechanism for a stage, wherein the mechanical switching mechanism of charge eliminating system comprises: a contact terminal including a contact terminal main body 8b, 12b, a third end, and a fourth end (see block 8 in Figure 1 and block 12 in Figures 2, 4 for open ends of the switch), the fourth end being electrically connected to the first end of the wiring line, and a contact state between the third end and the stage being physically turning on/off, and when the third end is in contact with the stage, the stage grounded through the third end of the contact terminal, the contact terminal main body, the fourth end, the first end of the wiring line, a resistor, and the second end of the wiring line (Column 5, lines 62-65, Column 6, lines 60-64).

Regarding Claim 7, Hilrose discloses a testing apparatus (see apparatus in Figures 1-2, 4-6), comprising the charge eliminating mechanism, which tests electrical characteristics of a work-to-be-processed (Figures 3A-3C for testing results, Column 1, lines 65-67, Column 2, 1-7, 40-63, Column 5, 7-15, Column 7, lines 45-57). Claims 8-9 recite the elements of Claims 2-3 for the testing apparatus comprising the charge eliminating mechanism instead of charge eliminating mechanism. Therefore, please see the rejection for Claims 2-3.

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilrose (US 6,878,233) in view of Puerto et al. (US 6,778,258). Regarding Claim 4, Hilrose does not disclose a charge eliminating mechanism, wherein at least one of the contact terminal and the stage includes an elastic contact mechanism to cause the third end of the contact terminal and the stage to come into elastic contact with each other. Puerto discloses a stage 230 for wafer processing and contact terminals which include an elastic contact mechanism to cause the contact terminal and the stage to come into elastic contact with each other (see contact block 225, contacts 226, 227 and contact pads 228, 229 in Figure 2B, Column 6, lines 51-64). It would have been obvious to those skilled in art at the time the invention was made to modify Hilrose's charge eliminating mechanism to provide a an elastic contact mechanism as taught by Puerto, because elastic contacts guarantee good electrical connection for testing and processing of wafers in semiconductor industries.

Regarding Claim 5, Puerto discloses the charge eliminating mechanism, wherein the stage 230 is rotatable in forward and reverse directions (see Figure 2B), and the elastic contact mechanism provided on the stage is a plate (provided with 228, 229) with spring properties formed on a top side surface of the stage (Column 6, lines 58-60).

Claim Regarding Claim 6, Puerto discloses that the elastic contact mechanism provided

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on the contact is a POGO pin (Column 6, lines 54-66). Claims 10-12 recite elements of Claims 4-6 for the testing apparatus comprising the charge eliminating mechanism instead of charge eliminating mechanism. Therefore, please see the rejection for Claim 4-6.

2. Claims 2-3 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US 5,880,924) in view of Poli et al. (US 5,280,979). Regarding Claim 2, Kumar discloses a charge eliminating mechanism, wherein the work-to-be-processed 12 is a work to be tested. Kumar does not disclose a resistor between the first and second ends of the wiring line. Poli discloses a charge eliminating mechanism (Figure 1), wherein the work to be processed is a work to be tested, and the wiring line includes a resistor 4 between the first and second ends (see resistor in Figure 2A). It would have been obvious to those skilled in the art at the time the invention was made to modify Kumar's charge eliminating mechanism to include a resistor in the wiring line as taught by Poli, because resistor protect the circuits on the work-to-be processed from damage due to rapid discharge of electrostatic charge.

Regarding Claim 3, Kumar discloses the charge eliminating mechanism, wherein the mechanical switching mechanism (switch 165) of charge eliminating system comprises: a contact terminal including a contact terminal main body, a third end (adjacent electrode 85), and a fourth end (adjacent voltage supply 170) (see switch 165 and its parts in Figure 4, electrode 85, conductor element 140), the fourth end being electrically connected to the first end of the wiring line, and a contact state between the third end and the stage being physically turning on/off, and when the third end is in

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contact with the stage, the stage grounded through the third end of the contact terminal, the contact terminal main body, the fourth end, the first end of the wiring line, and the second end of the wiring line (Column 3, lines 16-22, 32-37, Column 4, lines 60-67, Column 6, lines 29-58). Claims 8-9 recite the elements of Claims 2-4 for the testing apparatus comprising the charge eliminating mechanism instead of charge eliminating mechanism. Therefore, please see the rejection for Claims 2-3.

8. Claims 4-6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US 5,880,924) in view of Poli et al. (US 5,280,979) and Puerto et al. (US 6,778,258). Regarding Claim 4, both Kumar and Poli do not disclose the charge eliminating mechanism, wherein at least one of the contact terminal and the stage includes an elastic contact mechanism to cause the third end of the contact terminal and the stage to come into elastic contact with each other. Puerto discloses a stage 230 for wafer processing and contact terminals which include an elastic contact mechanism to cause the contact terminal and the stage to come into elastic contact with each other (see contact block 225, contacts 226, 227 and contact pads 228, 229 in Figure 2B, Column 6, lines 51-64). It would have been obvious to those skilled in art at the time the invention was made to modify Kumar's and Poli's charge eliminating mechanism to provide a an elastic contact mechanism as taught by Puerto, because elastic contacts guarantee good electrical connection for testing and processing of wafers in semiconductor industries.

Regarding Claim 5, Puerto discloses the charge eliminating mechanism, wherein the stage 230 is rotatable in forward and reverse directions (see Figure 2B), and the

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elastic contact mechanism provided on the stage is a plate (provided with 228, 229) with spring properties formed on a side surface of the stage (Column 6, lines 58-60). Claim Regarding Claim 6, Puerto discloses that the elastic contact mechanism provided on the contact is a POGO pin (Column 6, lines 54-66). Claims 10-12 recite elements of Claims 4-6 for the testing apparatus comprising the charge eliminating mechanism instead of charge eliminating mechanism. Therefore, please see the rejection for Claim 4-6.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy Thomas whose telephone number is 571-272-6002. The examiner can normally be reached on Monday - Friday 8:00 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



PHUONG T. VU
PRIMARY EXAMINER